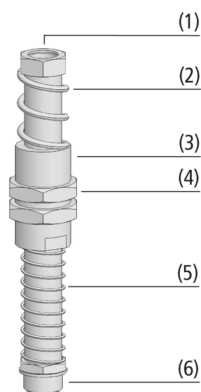


Spring Plungers FSTA-HD

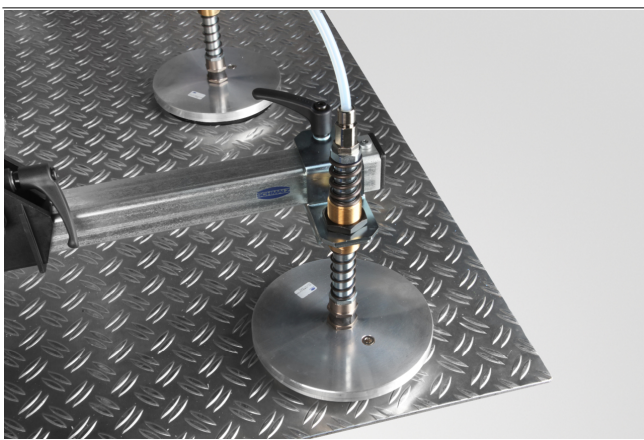
Stroke from 25 mm to 90 mm



Spring Plungers FSTA-HD



System Design Spring Plungers FSTA-HD



Mounting example spring plungers FSTA-HD

Suitability for Industry Specific Applications

Applications

- Spring plunger with two damping springs and special sliding bearings for handling of workpieces with differing heights, such as curved metal sheets, etc.
- Handling of very sensitive workpieces (such as sheets of glass) without additional control functions to prevent damage, since the plunger ensures soft placement
- For use under rough operating conditions
- For handling tasks with very dynamic motion and short cycle times

Design

- Spring plunger consisting of high-strength steel rod, guide sleeve (3) with integrated bearing and lower (5) and upper (2) damping spring
- Plunger rod with integrated vacuum feed, always female connection thread (1)
- Anti-rotation guard due to flat side on the rod and a correspondingly shaped guide sleeve
- Thread for suction cup is always a male thread (6)
- Two lock nuts (4) for attachment

Product Highlights

- Maintenance-free and durable thanks to high-quality plain bearings and machined push rod; enables minimum cycle times
- With two damping springs (optionally secured against rotation) optimized for sensitive workpieces, absorbs shocks and vibrations, prevents overstroke
- Large range of connecting threads and stroke lengths enables a wide variety of applications with standard suction cups

Spring Plungers FSTA-HD

Stroke from 25 mm to 90 mm

Designation Code Spring Plungers FSTA-HD

FSTA	-	HD	-	G1/4-AG	-	50	-	VG
1		2		3		4		5

1 – Abbreviated designation

Code	Version
FSTA	FSTA

2 – Variant

Code	Type
HD	Heavy duty

3 – Suction cup connection

Code	Connection
G1/4-AG	G1/4-AG (AG = male (M))
G3/8-AG	G3/8-AG
G1/2-AG	G1/2-AG

4 – Plunger stroke

Code	Plunger stroke in mm
25...90	25 to 90

5 – Product addition

Code	Type
VG	With anti-rotation guard

Spring plunger FSTA-HD is delivered as a ready-to-connect product.

Ordering Data Spring Plungers FSTA-HD

Type*			Plunger stroke in mm:		
			25	50	90
FSTA-HD	G1/4-AG	-	10.01.02.00777	10.01.02.00778	-
FSTA-HD	G1/4-AG	VG	10.01.02.00884	10.01.02.00885	-
FSTA-HD	G3/8-AG	-	10.01.02.00814	10.01.02.00815	10.01.02.00816
FSTA-HD	G3/8-AG	VG	10.01.02.00886	10.01.02.00887	10.01.02.00888
FSTA-HD	G1/2-AG	-	10.01.02.00779	10.01.02.00780	10.01.02.00781
FSTA-HD	G1/2-AG	VG	10.01.02.00889	10.01.02.00890	10.01.02.00891

*Recommendation: To raise the lifetime in continuous operation, prevent the maximal slide stroke

Spring Plungers FSTA-HD

Stroke from 25 mm to 90 mm

Technical Data Spring Plungers FSTA-HD

Type	Spring rate [N/mm]	Spring pretension [N]	Spring force center [N]*	Vertical load [N]**	Horizontal load [N]***	Anzugsdrehmoment (max) [Nm]	Weight [g]	Operating temperature [°C]
FSTA-HD G1/4-AG 25	0.711	8.95	17.8	2,400	800	40	185	0 ... 80 °C
FSTA-HD G1/4-AG 25 VG	0.711	8.95	17.8	2,400	800	40	185	0 ... 80 °C
FSTA-HD G1/4-AG 50	0.262	14.10	20.6	2,400	490	40	210	0 ... 80 °C
FSTA-HD G1/4-AG 50 VG	0.262	14.10	20.6	2,400	490	40	210	0 ... 80 °C
FSTA-HD G3/8-AG 25	3.828	25.65	73.5	4,800	1,870	50	495	0 ... 80 °C
FSTA-HD G3/8-AG 25 VG	3.828	25.65	73.5	4,800	1,870	50	495	0 ... 80 °C
FSTA-HD G3/8-AG 50	1.810	3.95	49.2	4,800	1,200	50	540	0 ... 80 °C
FSTA-HD G3/8-AG 50 VG	1.810	3.95	49.2	4,800	1,200	50	540	0 ... 80 °C
FSTA-HD G3/8-AG 90	1.072	24.38	75.3	4,800	730	50	645	0 ... 80 °C
FSTA-HD G3/8-AG 90 VG	1.072	24.38	75.3	4,800	730	50	645	0 ... 80 °C
FSTA-HD G1/2-AG 25	3.828	25.65	73.5	4,900	1,870	50	493	0 ... 80 °C
FSTA-HD G1/2-AG 25 VG	3.828	25.65	73.5	4,900	1,870	50	495	0 ... 80 °C
FSTA-HD G1/2-AG 50	1.810	3.95	49.2	4,900	1,200	50	539	0 ... 80 °C
FSTA-HD G1/2-AG 50 VG	1.810	3.95	49.2	4,900	1,200	50	540	0 ... 80 °C
FSTA-HD G1/2-AG 90	1.072	24.38	75.3	4,900	730	50	645	0 ... 80 °C
FSTA-HD G1/2-AG 90 VG	1.072	24.38	75.3	4,900	730	50	645	0 ... 80 °C

*Referred to 50 % of operating stroke

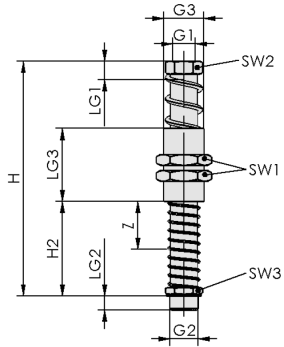
**Maximum static loading

***The specification of the horizontal load refers to the lower edge of the plunger with extended spring. It is a maximum static stress and it impairs the spring compression and extension in horizontal position.

Spring Plungers FSTA-HD

Stroke from 25 mm to 90 mm

Design Data Spring Plungers FSTA-HD



FSTA-HD

Spring Plungers FSTA-HD

Stroke from 25 mm to 90 mm

Design Data Spring Plungers FSTA-HD

Type	G1	G2	G3	H [mm]	H2 [mm]	LG1 [mm]	LG2 [mm]	LG3 [mm]	SW1 [mm]	SW2 [mm]	SW3 [mm]	Z (Stroke) [mm]
FSTA-HD G1/4-AG 25	G1/8"-F	G1/4"-M	M20x1.5-M	114.5	37.5	12	8.5	40	24	17	17	25
FSTA-HD G1/4-AG 25 VG	G1/8"-F	G1/4"-M	M20x1.5-M	114.5	37.0	12	8.5	40	24	17	17	25
FSTA-HD G1/4-AG 50	G1/8"-F	G1/4"-M	M20x1.5-M	144.0	67.0	12	8.5	40	24	17	17	50
FSTA-HD G1/4-AG 50 VG	G1/8"-F	G1/4"-M	M20x1.5-M	144.0	66.5	12	8.5	40	24	17	17	50
FSTA-HD G3/8-AG 25	G3/8"-F	G3/8"-M	M30x1.5-M	146.5	40.8	12	10.5	53	36	24	24	25
FSTA-HD G3/8-AG 25 VG	G3/8"-F	G3/8"-M	M30x1.5-M	147.0	40.8	12	10.5	53	36	24	24	25
FSTA-HD G3/8-AG 50	G3/8"-F	G3/8"-M	M30x1.5-M	176.5	70.8	12	10.5	53	36	24	24	50
FSTA-HD G3/8-AG 50 VG	G3/8"-F	G3/8"-M	M30x1.5-M	177.0	70.8	12	10.5	53	36	24	24	50
FSTA-HD G3/8-AG 90	G3/8"-F	G3/8"-M	M30x1.5-M	229.5	123.8	12	10.5	53	36	24	24	90
FSTA-HD G3/8-AG 90 VG	G3/8"-F	G3/8"-M	M30x1.5-M	230.0	123.8	12	10.5	53	36	24	24	90
FSTA-HD G1/2-AG 25	G3/8"-F	G1/2"-M	M30x1.5-M	146.5	40.3	12	10.5	53	36	24	24	25
FSTA-HD G1/2-AG 25 VG	G3/8"-F	G1/2"-M	M30x1.5-M	146.5	40.3	12	10.5	53	36	24	24	25
FSTA-HD G1/2-AG 50	G3/8"-F	G1/2"-M	M30x1.5-M	176.5	70.3	12	10.5	53	36	24	24	50
FSTA-HD G1/2-AG 50 VG	G3/8"-F	G1/2"-M	M30x1.5-M	176.5	70.3	12	10.5	53	36	24	24	50
FSTA-HD G1/2-AG 90	G3/8"-F	G1/2"-M	M30x1.5-M	229.5	123.3	12	10.5	53	36	24	24	90
FSTA-HD G1/2-AG 90 VG	G3/8"-F	G1/2"-M	M30x1.5-M	229.5	123.3	12	10.5	53	36	24	24	90